SEATTLE UNIVERSITY
Albers School of Business and Economics
FINC 5335: Hedge Funds

Fall 2017
Pigott 309
Wednesday 6:00 p.m. – 8:40 p.m.

INSTRUCTOR
Dr. Jot Yau, CFA
Office: Pigott 503
Phone: 206-296-5639 (voice mail)
E-mail: jyau@seattleu.edu
Office Hours: Tuesday 2:30pm-3:30pm, and Wednesday 4:00p.m.-5:45p.m.; other times by appointment

OFFICE HOURS AND COMMUNICATING WITH ME
I am very flexible in scheduling appointments outside of scheduled office hours. Don’t hesitate to request an appointment, and I will set it up. I request that you forewarn me since it allows me to give you full attention to your needs that you deserve and not be distracted by my other engagements. To avoid disappointment when you stop by, please let me know when you are coming in during the scheduled office hours.

I check my e-mails in the SU account regularly (jyau@seattleu.edu). If you send emails via CANVAS, make sure you send a copy to my SU email account as well for a quicker response. I am happy to provide you with assistance and quick feedback by e-mail. Should your question either require a long answer (i.e., more than two sentences) or be beneficial to other members of the class to listen, I will bring the answer to class.

For announcements and information sent to this class as well as requests that involve personal information (e.g., grades), I will disseminate them to your e-mail account at Seattle University ONLY. Please make sure your SU e-mail account is able to accept incoming e-mails at all times and check it regularly.

COURSE WEBSITE

http://seattleu.instructure.com

Please visit the course website on CANVAS frequently during the term for announcements regarding possible changes in deadlines, schedules and policies, class notes, and assignments, if any.
COURSE OBJECTIVES
After taking the course, you should be able to
• explain the theory and practice of hedge fund management
• describe some of the main trading strategies used by hedge funds and applies a methodology to analyze them
• illustrate how a hedge fund strategy is formulated, back-tested, and evaluated using real data
• articulate both verbally and in the written form the benefits and risks of a selected hedge to prospective investors in both the verbal and written form
• analyze various operational issues, such as fees and compensation, leverage, and risk management.
• describe and explain the alternative legal structures for hedge funds and the regulatory environment in the U.S.

PREREQUISITE
FINC 5100 Investments (No exception)

Students are expected to be familiar with the concepts of the CAPM, single index (market) model and using the OLS regression to estimate beta, Efficient Market Hypothesis, capital market anomalies, four moments of a probability distribution (mean, variance, skewness, and kurtosis), portfolio mathematics (computation of portfolio return, variance, and covariance/correlation) and portfolio diversification principles, computation of arithmetic and geometric averages, mean-variance criterion, performance measurement (reward-to-variability (Sharpe) ratio, Treynor ratio, Jensen alpha), and basic option strategies.

Use of Calculator: Students must be proficient in using a financial calculator; only calculators with no user-programmable capabilities are allowed during all exams. If you have doubts about your calculator, check with me now. I recommend students to learn how to use the financial calculators approved for use in the CFA exams: Texas Instruments BA Plus II or Hewlett Packard 12C.

REQUIRED TEXTS

RECOMMENDED READINGS
Regular outside readings will enhance the understanding of the subject, and it is highly recommended. Students are encouraged to read the following regularly:

Newspapers: The Wall Street Journal; The Financial Times
           Journal of Investing; Journal of Portfolio Management; Journal of Wealth Management
Magazines: Fortune; Institutional Investors; The Economists;
REQUIREMENTS

(a) **COURSE PARTICIPATION.** This class requires substantial reading before class and rely heavily on class discussion to illuminate the issues regarding hedge fund management and research. Active participation is expected and 10% of the final grade is allocated to this valuable classroom activity. I strongly encourage you to offer your opinions voluntarily in class that will enrich the discussion and give a different perspective to the class to consider. I value “quality” discussions more than “quantity.” Sometimes, if you are not sure whether your question is relevant to current discussion or to the whole class to listen (e.g., a problem that you want to solve on the job), please save it for discussion with me outside the class time. Asking questions at the wrong time (e.g., 10 minutes after the topic has been discussed) may also distract class attention and it is considered as a negative towards your course participation.

The distinctive advantage of being taught in person in a classroom environment (vis-à-vis online distance learning) is the opportunity to interact, both inside and outside classroom, with the professors who would hopefully enlighten you and your classmates who would share their experiences with you. Asking sensible questions in class will stimulate your thinking (as well as mine). I cannot promise you that I know all the answers but I will do my best. Sometimes, you may be lucky to hit on some potential exam questions.

**Attendance Policy ***Important!**

Regular class attendance is expected during the term. Regular class attendance is defined as attending at least 9 of all scheduled 10 meetings. Leaving early from any class or arriving late (after 30 minutes of start time) will count as absence for half a class. Irregular class attendance will automatically reduce your course participation grade by 5 points towards the course grade.

(b) **EXAMS.** There will be two in-class, closed-book exams. Exams will have concept questions, and/or problems. Details will be given in the review topics sheet handed out before the exams.

(c) **TERM PROJECT.** As a 2-person team effort, you are required to submit a term paper and make a class presentation at on **November 29.**

You need to submit a project proposal and have it approved by **October 18.** The sooner you turn it in, the sooner you can have it approved, and the more time you have to work on the project. The proposal should not be more than two pages (single spaced, minimum 12 point font). You are welcome to stop by my office to discuss your proposal with me.

Proposal Contents:
The proposal should describe the following aspects of your proposed project:

1. Briefly explain the proposed hedge fund strategy;
2. Discuss your plan to illustrate how the strategy works under different market conditions (you may also want to discuss how you plan to manage the possible risks of this strategy);
3. Discuss how you would test your proposed strategy (i.e., briefly describe your methodology for carrying out the back-tests of your proposed strategy) and what data you need to do that;
4. Discuss the data you will be using in the project;
5. List the preliminary literature you have already reviewed in the proposal preparation (blogs do not
Note: There is one type of investment strategy that will not be acceptable for fulfilling this course requirement: The long-only (aka the buy-and-hold) strategy. If you are not sure whether your proposed strategy is acceptable or not, please see me and discuss your proposal before you submit it for approval.

Your grade on the term project depends on the grade your team receives on the paper and the peer evaluation. Project presentation will be evaluated by the professor and peers. Peer evaluation will be done at the end of the quarter. Guidelines and instructions are attached at the end of the syllabus.

**GRADING CRITERIA**

**Grading Criteria for Course Participation**

<table>
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<tr>
<th>Grade</th>
<th>Description</th>
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<tr>
<td>90% or more</td>
<td>Extremely well-prepared for almost all assignments, as indicated by in-class discussions. Extremely involved in almost all class discussions. Significantly helped create an exciting class discussion on a regular basis. Regularly provided insights regarding relevant outside reading material. Often talked with professor outside of class regarding course material. Regular class attendance.</td>
</tr>
<tr>
<td>80% or more</td>
<td>Well-prepared for almost all assignments, as indicated by in-class discussions. Involved in almost all class discussions. Helped create an exciting class discussion on a regular basis. Occasionally provided relevant outside reading material with some comments. Occasionally talked with professor outside of class regarding course material. Regular class attendance.</td>
</tr>
<tr>
<td>70% or more</td>
<td>Occasionally well-prepared for assignments, as indicated by in-class discussions. Occasionally got involved in class discussions. Did not detract from creating an exciting class discussion. Provided some relevant outside reading material. Once talked with professor outside of class regarding course material. Regular class attendance.</td>
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**Grading Criteria for Term Paper**

Grading of the term paper is based on quality of ideas (i.e., quality of research or original thought, and/or methodology), organization and development, clarity and style (this also includes presentation of
quantitative analysis, if any), and grammatical correctness. The top score (95% or more) is reserved for the best papers.

95% or more: Interesting research questions are clearly identified. Methodology is appropriate and creative. All quantitative analyses and results, if applicable to the study, and are clearly presented and explained. All conclusions are supported by the analysis presented. The paper is easy to read, well organized and coherent. Writing is free from long stretches of quotations and summaries that exist only for their own sakes and remain unanalyzed; free from grammatical errors, spelling mistakes, typographical errors, dangling sentences, incomplete sentences, incorrect punctuations. All references are appropriately included and cited.

80% or more: Research questions are clearly identified. Methodology is not as rigorous but appropriate. Almost all quantitative analyses and results, if applicable to the study, are clearly presented and explained. Almost all conclusions are supported by the analysis presented. The paper is easy to read with occasional in-coherences in organization and transition. Some rough spots in grammar and sentence structure, including incorrect punctuations, typos, and spelling mistakes. Almost all references are appropriately included and cited.

70% or more: Research questions are not identified or implicitly asked. Methodology is not quite appropriate. Some quantitative analyses and results, if applicable to the study, are clearly presented and explained. Conclusions are not fully supported by the analysis presented. The paper is difficult to read with in-coherences organization and transition. Many rough spots in grammar and sentence structure, including incorrect punctuations, typos, and spelling mistakes. Some references are appropriately included and cited.

GRADE DETERMINATION

<table>
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<tr>
<th>Component</th>
<th>Percentage</th>
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<tr>
<td>Mid-term Exam</td>
<td>23%</td>
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<td>Final Exam</td>
<td>22%</td>
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<tr>
<td>Course Participation</td>
<td>10%</td>
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<tr>
<td>Term Project Paper</td>
<td>30%</td>
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<tr>
<td>Term Project Presentation</td>
<td>15%</td>
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<tr>
<td>Total</td>
<td>100%</td>
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Your course grade depends on the distribution of the weighted average scores. Normally, a weighted average score of 95 or above is an A, 90 or above is A-, between 80-89 is (B+, B, B-), 65-79 is (C+, C, C-). The actual demarcation line for each grade depends on the actual distribution of all weighted average grades. If the distribution is a really tight one, I may decide to forgo the plus or minus grades.

Students often claim they did not show how much they knew on the test. Alternatively, they may indicate that they studied "real hard" but just could not grasp the material before exams. Having been a student for over 20 years myself, I am sure that such sentiments have a certain amount of validity. But, under the present system, I must say that the points are really irrelevant. I have no better measure of performance by effort rather by result. Therefore, to be fair to everybody, grades are based on performance -- not “knowledge” or effort. Accordingly, one's efforts should be directed toward achieving the maximum performance relative to potential and input. The advice that I can offer you now is:

"QUANTUM POTES, TANTUM AUDE"

ACADEMIC HONESTY POLICY

***Important*** Read this carefully!

Students are expected to observe the University Academic Honesty Policy at all times. Any group or individual work you are required to turn in must reflect your own thinking and effort. The use of material from previous quarters, other students and other sources of solutions is explicitly forbidden. You are not permitted to work or collaborate with other students on individual assignments or with other groups on the term project. When in doubt, please consult me. Cheating will result, at the very least, in a grade of zero for the assignment in question.

MAKE-UP EXAM POLICY

No make-up exams will be given without legitimate excuses and proof. If the legitimate excuses are foreseeable, they must be submitted prior to the scheduled exam. If they are unanticipated such as medical emergencies or death of family member, you should be able to produce documentation if asked. Make-up exams are usually given before the scheduled exam time, more difficult, and graded on an absolute scale. If scheduling a make-up exam is not feasible, the instructor has the discretion to redistribute the weights to the unfinished assignments but no retroactive redistribution to the completed assignments.

DISABILITIES POLICY

If you have, or think you may have, a disability (including an ‘invisible disability’ such as a learning disability, a chronic health problem, or a mental health condition) that interferes with your performance as a student in this class, you are encouraged to arrange support services and/or accommodations through Disabilities Services staff in the Learning Center, Loyola 100, (206) 296-5740. Disability-based adjustments to course expectations can be arranged only through this process.
ELECTRONIC GADGETS POLICY
The use of laptops, netbooks, iPads, Kindle, PDAs, blackberrys, cellphones, or any other handheld electronic/digital gadgets is **not allowed** in class. Each violation will be penalized by the deduction of course participation score toward the course grade.

LECTURE RECORDING POLICY
For protection of proprietary knowledge and for a variety of other reasons, audio and videotaping of any class session is strictly prohibited without prior approval of the instructor. Under extreme circumstances or for a pre-approved class absence, audio taping a class session will be allowed on a case by case basis and with the express permission of the instructor. The student will be responsible for making all necessary arrangements. Students will need to adhere to the appropriate agreed upon use of the content material of these audio/video tape.
<table>
<thead>
<tr>
<th>Week/Date</th>
<th>Topics</th>
<th>Assignments</th>
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| 1/ Sep 20 | • Course requirements/Assignments  
• Overview- What are hedge funds? Definition, classification, and fundamentals  
• Concept of “Inefficiently efficient” markets | - Notes HF1  
- LP#1Introduction (pp. 1-16)  
- LP#1 (pp. 19-26)  
- AIMA1  
- AIMA2 (pp. 6-17) |
| 2/ Sep 27 | • Term Project  
• Discretionary equity investing  
• Long/Short Equity & Long/Short Market Neutral Strategy | - Notes HF2, HF3  
- Review LP#6 (pp. 87-94)  
- LP#7 (pp. 95-114)  
- Jacobs (handout) |
| 3/ Oct 4 | • Quantitative Equity Investing (& Market neutral strategies)  
• Dedicated Short Bias | - Notes HF4, HF5  
- LP#9 (pp. 133-164)  
- LP#8 (pp. 115-132)  
- Do and Faff (reference) |
| 4/ Oct 11 | • Global Macro Investing  
• Managed Futures | - Notes HF6, HF7  
- LP#11 (pp. 184-207), #12 (pp. 208-229)  
- Review LP#10 (pp.167-183) |
| 5/ Oct 18 | • Evaluating Trading Strategies: Performance Measures  
• Finding and Backtesting Strategies: Profiting in Efficiently Inefficient Markets  
• How to backtest a trading strategy  
• Portfolio Construction and Risk  
• Trading and Financing a Strategy | (Deadline for the approval of term project)  
- Notes HF8  
- LP#2 (pp. 27-38), #3 (pp. 39-53); #4 (pp. 54-62); #5 (pp. 63-84) |
| 6/ Oct 25 | MID-TERM EXAM (Covers Week# 1-4) | |
| 7/ Nov 1 | • Introduction to Arbitrage Strategies  
- Convertible Bond Arbitrage  
- Event-Driven Investments | - Notes HF9, HF10  
- LP#13 (pp. 233- 240), #15 (pp. 269-290), #16 (pp.291-322)  
- Bierman (reference); Jetley and Ji (reference) |
| 8/ Nov 8 | • Arbitrage Strategies (cont’d)  
• Databases, Indices and Benchmarks | - Notes HF11  
- AIMA4 (pp. 100-117, 135-136); |
| 9/ Nov 15 | • Legal Environment: U.S. Regulations and Exemptions  
• Legal and Organizational Structures | - Notes HF12  
- AIMA4 (pp. 90-94)  
- AIMA4 (pp. 41-54) |
| 10/ Nov 29 | Project Presentation | Term paper due in class |
| Dec 6 | FINAL EXAM (Covers Week#5, 7-9) | |

*LP# refers to the chapter in L. Pedersen’s book, Efficiently Inefficient; Names refer to the additional readings listed below

*E# refers to the Exercises provided by Professor Pedersen at his website: [http://docs.lhpedersen.com/EfficientlyInefficient_Exercises.pdf](http://docs.lhpedersen.com/EfficientlyInefficient_Exercises.pdf)
*Additional Readings*


FINC 5335 Hedge Funds (Fall 2017)
Term Project Guidelines and Instructions

Dr. Jot Yau, CFA

Objectives
The objective of this group term project is to provide an opportunity for you to develop a white paper that focuses on a specific hedge fund strategy that your hedge fund proposes to use. Specifically, after the project is done, you should be able to
   1. Demonstrate a good understanding of a hedge fund strategy;
   2. Illustrate how a hedge fund strategy is formulated, back-tested and evaluated; and
   3. Articulate both verbally and in the written form the benefits of the proposed hedge fund strategy and explain the test results and risks to prospective investors who know little about the strategy.

Format
This is a group project. Each team should have 2 members.

Deliverables
   1. A white paper that is going to be presented to prospective “accredited investors” and the programs (e.g. excel or others) that you use to formulate and test the hedge fund strategy. An electronic copy of the paper and the programs and results. The white paper should include the four elements (steps) that are described below in the instructions section. The paper should NOT have more than 20 pages (double spaced, at least 12 point font; appendices and bibliography not included). The due date for the paper is November 29.

   2. A class presentation of the project on November 29. Each group will have 15 minutes of presentation (including the set-up time) and 5 minutes of Q&A. The order of presentation will be determined by drawing lots on that day. Presentations will be evaluated by the professor as well as the peers. (See the syllabus for the computation of your grade for project presentation)

Due Date
November 29

Instructions
There are four distinct elements required in the project and your team must complete all these four steps satisfactorily in order to receive a “B” grade.
   1. Formulate and explain your hedge fund strategy;
   2. Model the proposed strategy, i.e., discuss and illustrate how the strategy works under different market conditions (e.g. up and down markets) and the risks of the strategy (i.e. backtesting) and present the empirical results of the strategy;
   3. Test the out-of-sample performance of the strategy, and
   4. Evaluate and justify the proposed strategy as a viable strategy for the prospective “accredited investors” of your hedge fund.
Step 1 Formulation of your hedge fund strategy

There are many hedge fund strategies (relative value, event driven, opportunistic and managed futures) and sub-strategies to choose from. For example, under the relative value strategy there are convertible arbitrage, fixed income arbitrage, equity market neutral, pairs trading; under the event driven, there are risk arbitrage, distressed securities, convertible debenture arbitrage (Regulation D); under the opportunistic strategy, there are global macro, long/short equity, equity market timing and short-selling; and under the managed futures, there are futures active: systematic technical, discretionary and futures passive.

Which strategy are you going to use for your hedge fund? It depends very much on the data availability and of course your own interest. More importantly, you want to work on some strategy that you think will work (i.e. give your client absolute returns or positive alpha). It is in this section that you would try to sell your idea to the prospective clients.

This is also the place where you would map out carefully how to set up and operationalize your strategy. For example, a convertible arbitrage requires a valuation model for the convertible bond and the stock as well as an arbitrage model. Likewise, a long-short equity strategy requires a valuation for equity as well as an arbitrage model. A literature search may help you understand the economic rationales behind each strategy, consider the operational details as well as provide empirical results to substantiate the efficacy of the strategy. You also need to explain how risks are controlled under the strategy.

To help you to narrow the scope of your search, I suggest the following strategies for differing skill sets:

1. Market neutral strategies (for those who know how to use Excel solver in portfolio optimization)
   a. Beta-neutral
   b. Efficient long-short

2. Long-short
   a. Pairs trading (for those who feel comfortable in working with statistics and fundamental analysis)
   b. Long-short equity (for those who feel comfortable with fundamental stock valuation)
   c. Quantitative equity trading – this includes statistical arbitrage, high frequency trading using technical indicators

3. Relative value - Convertible arbitrage (for those who like to work with fixed income securities/embedded options)

4. Managed futures – technical approach to commodities trading

5. Global macro
   a. Carry trades (on currencies/fixed income)
   b. Central bank monitoring
   c. Economic development

If you would like to work on other strategies not listed above, please feel free to discuss with me.
**Step 2 Modeling**
In this step, you build your model of your strategy based on historical data. How much historical data you need to build your model depends on the strategy. For example, for a long-short equity strategy, you have more data points to put your strategy to trial than an event driven strategy such as risk arbitrage, which is not advisable because of the lack of data for backtesting purposes. If you have a larger sample for statistical testing, you should carry out the statistical testing for significance. If you don’t, you should try to test the strategy in different ways and for different periods and market conditions (ups and downs) to show the versatility of the strategy and the robustness of results.

**Step 3 Out-of-Sample Performance Tests**
After you have tested successfully the strategy, you need to do an out-of-sample testing. If your strategy doesn’t allow out-of-sample testing (e.g., distressed investing, merger arbitrage), you need to do a Monte-Carlo simulation testing. Evaluate the performance of the strategy under different market conditions, be they historical or simulations.

**Step 4 Evaluation and Justification (Report Write-up)**
In this final step, you need to evaluate and articulate the benefits of the chosen strategy to the prospective investors. You justify the assertion by presenting the evidence from the model period and out-of-sample tests (back-tests). This is the place where you try to convince your investors to put their money in your fund.

The report should be written and presented in a professional manner targeting at the high-net-worth investors. An executive summary and a table of contents typically improve readability and presentation of the report. In addition, results should be presented with tables or exhibits attached at the end of the report and figures/graphs should be used when appropriate.

**Some Suggested References**